Aim of this study
To investigate the interface between core / skin by using EPMA and EBSD to make the solidification manner clear

• Final goal : To make phenomena happening during casting clear to apply this method to other kinds of materials

Material
• Core: Al-4.4wt%Cu (Solidus temperature: 570 ºC)
• Skin: pure Al (Melting temperature: 660 ºC)

Because of heat transfer from the skin melt to the core layer at the upper point of the 2nd roll gap, re-melting and grain growth occurred around surface of the core layer.

Further discussion is needed about how solidification progress after the surface of the core is re-molten during the casting.

References

Because the core layer is heated by the skin melt, re-melting and grain growth happen. As a result, “the large width grain” is formed near the surface of the core layer.